

SEQUENCE LISTING

<110> Luche, Ralf M.
Wei, Bo

<120> DSP-11 DUAL SPECIFICITY PHOSPHATASE

<130> 200125.418C1

<140> US

<141> 2003-09-04

<160> 22

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 707

<212> DNA

<213> Homo sapiens

<400> 1

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gtgcttccgg	gccggctggc	gggactggcg	ctgccgcggc	tccccgcca	ctaccagttc	120
ctgttggaac	tgggcgtgcg	gcacctgggtg	tccctgacgg	agcgcgggcc	ccctcacagc	180
gacagctgcc	ccggcctcac	cctgcaccgc	ctgcgcaccc	ccgacttctg	cccgcgggcc	240
cccgaaccaga	tcgaccgctt	cgtgcagatc	gtggacgagg	ccaacgcacg	gggagaggct	300
gtgggagtgc	actgtgctct	gggctttggc	cgcactggca	ccatgctggc	ctgttacctg	360
gtgaaggagc	ggggcttggc	tgcaggagat	gccattgctg	aaatccgacg	actacgaccc	420
ggctccatcg	agacctatga	gcaggagaaa	gcagtcttcc	agttctacca	gcgaacgaaa	480
taaggggcct	tagtaccctt	ctaccaggcc	ctcactcccc	ttccccatgt	tgtcgatggg	540
gccagagatg	aagggaagtg	gactaaagta	ttaaaccctc	tagtcccat	tggtgaaga	600
cactgaagta	gccaccacct	gcaggcaggt	cctgattgaa	ggggaggctt	gtactgcttt	660
gttgaataaa	tgagttttac	gaaccaaaaa	aaaaaaaaaa	aaaaaaa		707

<210> 2

<211> 150

<212> PRT

<213> Homo sapiens

<400> 2

Met	Gly	Val	Gln	Pro	Asn	Phe	Ser	Trp	Val	Leu	Pro	Gly	Arg	Leu
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Ala	Gly	Leu	Ala	Leu	Pro	Arg	Leu	Pro	Ala	His	Tyr	Gln	Phe	Leu
		20					25					30		
Asp	Leu	Gly	Val	Arg	His	Leu	Val	Ser	Leu	Thr	Glu	Arg	Gly	Pro
		35				40					45			
His	Ser	Asp	Ser	Cys	Pro	Gly	Leu	Thr	Leu	His	Arg	Leu	Arg	Ile
	50					55					60			
Asp	Phe	Cys	Pro	Pro	Ala	Pro	Asp	Gln	Ile	Asp	Arg	Phe	Val	Gln
65					70				75					80

Val Asp Glu Ala Asn Ala Arg Gly Glu Ala Val Gly Val His Cys Ala
 85 90 95
 Leu Gly Phe Gly Arg Thr Gly Thr Met Leu Ala Cys Tyr Leu Val Lys
 100 105 110
 Glu Arg Gly Leu Ala Ala Gly Asp Ala Ile Ala Glu Ile Arg Arg Leu
 115 120 125
 Arg Pro Gly Ser Ile Glu Thr Tyr Glu Gln Glu Lys Ala Val Phe Gln
 130 135 140
 Phe Tyr Gln Arg Thr Lys
 145 150

<210> 3
 <211> 21
 <212> PRT
 <213> Homo sapiens

<400> 3
 Val Gly Val His Cys Ala Leu Gly Phe Gly Arg Thr Gly Thr Met Leu
 1 5 10 15
 Ala Cys Tyr Leu Val
 20

<210> 4
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 4
 Asn Gly Arg Val Leu Val His Cys Gln Ala Gly Ile Ser Arg Ser Gly
 1 5 10 15
 Thr Asn Ile Leu Ala Tyr Leu Met
 20

<210> 5
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 5
 cgggtcgtag tcgtcggatt tcagcaa

27

<210> 6
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 6
 cctctcccg tgcgttgcc tcgt

24

<210> 7
 <211> 18
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 7
 cgcacgggga gaggctgt 18

<210> 8
 <211> 41
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 8
 gaggaataat aaatgacccg ctgtcctgtg ccctttccca g 41

<210> 9
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 9
 ttctgttcgc tggtagaact ggaagactgc tttc 34

<210> 10
 <211> 27
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 10
 atgggcgtgc aaccccccaa cttctcc 27

<210> 11
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> PCR primer

<400> 11

tcattttgtt cgctggtaga actggaagac ggcc

34

<210> 12
<211> 453
<212> DNA
<213> Mus musculus

<400> 12
atgggctgtc aaccccccaa cttctcctgg gtgcttcagg gacggctggc cggactggcg 60
ttgccccggc tgcccgcgca ctaccagttc ctgctggacc aggggtgtcg gcacctgggtg 120
tccctgacgg agcgcggacc cctcacagt gacagctgtc ccggcctcac gctgcaccga 180
atgcgcatcc ctgacttttg ccgcccgtcc ccggaacaga tcgaccaatt tgtgaagatc 240
gtggacgagg ccaatgcccg gggagaggct gttggagtgc actgtgccct aggctttggc 300
cgcactggca ccatgctagc ctgctacttg gtgaaggagc gggctttggc gccaggagat 360
gccattgctg agatccggcg cctgcgacca ggatccattg agacgtatga acaggagaag 420
gccgtcttcc agttctacca gcgaacaaaa tga 453

<210> 13
<211> 150
<212> PRT
<213> Mus musculus

<400> 13
Met Gly Val Gln Pro Asn Phe Ser Trp Val Leu Pro Gly Arg Leu
1 5 10 15
Ala Gly Leu Ala Leu Pro Arg Leu Pro Ala His Tyr Gln Phe Leu Leu
20 25 30
Asp Gln Gly Val Arg His Leu Val Ser Leu Thr Glu Arg Gly Pro Pro
35 40 45
His Ser Asp Ser Cys Pro Gly Leu Thr Leu His Arg Met Arg Ile Pro
50 55 60
Asp Phe Cys Pro Pro Ser Pro Glu Gln Ile Asp Gln Phe Val Lys Ile
65 70 75 80
Val Asp Glu Ala Asn Ala Arg Gly Glu Ala Val Gly Val His Cys Ala
85 90 95
Leu Gly Phe Gly Arg Thr Gly Thr Met Leu Ala Cys Tyr Leu Val Lys
100 105 110
Glu Arg Ala Leu Ala Pro Gly Asp Ala Ile Ala Glu Ile Arg Arg Leu
115 120 125
Arg Pro Gly Ser Ile Glu Thr Tyr Glu Gln Glu Lys Ala Val Phe Gln
130 135 140
Phe Tyr Gln Arg Thr Lys
145 150

<210> 14
<211> 170
<212> PRT
<213> Homo sapiens

<400> 14
Ser Asp Leu Asp Arg Asp Pro Asn Ser Ala Thr Asp Ser Asp Gly Ser
1 5 10 15
Pro Leu Ser Asn Ser Gln Pro Ser Phe Pro Val Glu Ile Leu Pro Phe
20 25 30

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Leu Tyr Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Glu
   35           40           45
Glu Phe Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn
   50           55           60
Leu Phe Glu Asn Ala Gly Glu Phe Lys Tyr Lys Gln Ile Pro Ile Ser
65           70           75           80
Asp His Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser
           85           90           95
Phe Ile Asp Glu Ala Arg Gly Lys Asn Cys Gly Val Leu Val His Cys
   100           105           110
Leu Ala Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met
   115           120           125
Gln Lys Leu Asn Leu Ser Met Asn Asp Ala Tyr Asp Ile Val Lys Met
   130           135           140
Lys Lys Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu
145           150           155           160
Asp Phe Glu Arg Thr Leu Gly Leu Ser Ser
           165           170

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<210> 15
<211> 168
<212> PRT
<213> Homo sapiens

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<400> 15
Asp Arg Glu Leu Pro Ser Ser Ala Thr Glu Ser Asp Gly Ser Pro Val
1           5           10           15
Pro Ser Ser Gln Pro Ala Phe Pro Val Gln Ile Leu Pro Tyr Leu Tyr
   20           25           30
Leu Gly Cys Ala Lys Asp Ser Thr Asn Leu Asp Val Leu Gly Lys Tyr
   35           40           45
Gly Ile Lys Tyr Ile Leu Asn Val Thr Pro Asn Leu Pro Asn Ala Phe
   50           55           60
Glu His Gly Gly Glu Phe Thr Tyr Lys Gln Ile Pro Ile Ser Asp His
65           70           75           80
Trp Ser Gln Asn Leu Ser Gln Phe Phe Pro Glu Ala Ile Ser Phe Ile
           85           90           95
Asp Glu Ala Arg Ser Lys Lys Cys Gly Val Leu Val His Cys Leu Ala
   100           105           110
Gly Ile Ser Arg Ser Val Thr Val Thr Val Ala Tyr Leu Met Gln Lys
   115           120           125
Met Asn Leu Ser Leu Asn Asp Ala Tyr Asp Phe Val Lys Arg Lys Lys
   130           135           140
Ser Asn Ile Ser Pro Asn Phe Asn Phe Met Gly Gln Leu Leu Asp Phe
145           150           155           160
Glu Arg Thr Leu Gly Leu Ser Ser
           165

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<210> 16
<211> 170
<212> PRT
<213> Homo sapiens

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<400> 16

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Gly	Leu	Cys	Glu	Gly	Lys	Pro	Ala	Ala	Leu	Leu	Pro	Met	Ser	Leu	Ser
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Gln	Pro	Cys	Leu	Pro	Val	Pro	Ser	Val	Gly	Leu	Thr	Arg	Ile	Leu	Pro
			20					25					30		
His	Leu	Tyr	Leu	Gly	Ser	Gln	Lys	Asp	Val	Leu	Asn	Lys	Asp	Leu	Met
		35					40					45			
Thr	Gln	Asn	Gly	Ile	Ser	Tyr	Val	Leu	Asn	Ala	Ser	Asn	Ser	Cys	Pro
	50					55					60				
Lys	Pro	Asp	Phe	Ile	Cys	Glu	Ser	Arg	Phe	Met	Arg	Val	Pro	Ile	Asn
65					70					75					80
Asp	Asn	Tyr	Cys	Glu	Lys	Leu	Leu	Pro	Trp	Leu	Asp	Lys	Ser	Ile	Glu
				85					90					95	
Phe	Ile	Asp	Lys	Ala	Lys	Leu	Ser	Ser	Cys	Gln	Val	Ile	Val	His	Cys
			100					105					110		
Leu	Ala	Gly	Ile	Ser	Arg	Ser	Ala	Thr	Ile	Ala	Ile	Ala	Tyr	Ile	Met
		115					120					125			
Lys	Thr	Met	Gly	Met	Ser	Ser	Asp	Asp	Ala	Tyr	Arg	Phe	Val	Lys	Asp
	130					135					140				
Arg	Arg	Pro	Ser	Ile	Ser	Pro	Asn	Phe	Asn	Phe	Leu	Gly	Gln	Leu	Leu
145					150					155					160
Glu	Tyr	Glu	Arg	Thr	Leu	Lys	Leu	Leu	Ala						
				165					170						

<210> 17
 <211> 168
 <212> PRT
 <213> Homo sapiens

Pro	Ala	Gln	Ala	Leu	Pro	Pro	Ala	Gly	Ala	Glu	Asn	Ser	Asn	Ser	Asp
1				5					10					15	
Pro	Arg	Val	Pro	Ile	Tyr	Asp	Gln	Gly	Gly	Pro	Val	Glu	Ile	Leu	Pro
			20					25					30		
Tyr	Leu	Tyr	Leu	Gly	Ser	Cys	Asn	His	Ser	Ser	Asp	Leu	Gln	Gly	Leu
		35					40					45			
Gln	Ala	Cys	Gly	Ile	Thr	Ala	Val	Leu	Asn	Val	Ser	Ala	Ser	Cys	Pro
	50					55					60				
Asn	His	Phe	Glu	Gly	Leu	Phe	His	Tyr	Lys	Ser	Ile	Pro	Val	Glu	Asp
65					70					75					80
Asn	Gln	Met	Val	Glu	Ile	Ser	Ala	Trp	Phe	Gln	Glu	Ala	Ile	Ser	Phe
			85						90					95	
Ile	Asp	Ser	Val	Lys	Asn	Ser	Gly	Gly	Arg	Val	Leu	Val	His	Cys	Gln
			100				105						110		
Ala	Gly	Ile	Ser	Arg	Ser	Ala	Thr	Ile	Cys	Leu	Ala	Tyr	Leu	Ile	Gln
		115					120					125			
Ser	His	Arg	Val	Arg	Leu	Asp	Glu	Ala	Phe	Asp	Phe	Val	Lys	Gln	Arg
	130					135					140				
Arg	Gly	Val	Ile	Ser	Pro	Asn	Phe	Ser	Phe	Met	Gly	Gln	Leu	Leu	Gln
145					150					155					160
Leu	Glu	Thr	Gln	Val	Leu	Cys	His								
				165											

<210> 18
 <211> 169

<212> PRT

<213> Homo sapiens

<400> 18

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Pro Leu Ser Thr Ser Val Pro Asp Ser Ala Glu Ser Gly Cys Ser Ser
 1          5          10          15
Cys Ser Thr Pro Leu Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20          25          30
Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Arg Lys Asp Met Leu
 35          40          45
Asp Ala Leu Gly Ile Thr Ala Leu Ile Asn Val Ser Ala Asn Cys Pro
 50          55          60
Asn His Phe Glu Gly His Tyr Gln Tyr Lys Ser Ile Pro Val Glu Asp
 65          70          75          80
Asn His Lys Ala Asp Ile Ser Ser Trp Phe Asn Glu Ala Ile Asp Phe
 85          90          95
Ile Asp Ser Ile Lys Asn Ala Gly Gly Arg Val Phe Val His Cys Gln
100          105          110
Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Arg
115          120          125
Thr Asn Arg Val Lys Leu Asp Glu Ala Phe Glu Phe Val Lys Gln Arg
130          135          140
Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
145          150          155          160
Phe Glu Ser Gln Val Leu Ala Pro His
165

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<210> 19

<211> 169

<212> PRT

<213> Homo sapiens

<400> 19

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Pro Val Pro Pro Ser Ala Thr Glu Pro Leu Asp Leu Gly Cys Ser Ser
 1          5          10          15
Cys Gly Thr Pro Leu His Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20          25          30
Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ala Arg Arg Asp Met Leu
 35          40          45
Asp Ala Leu Gly Ile Thr Ala Leu Leu Asn Val Ser Ser Asp Cys Pro
 50          55          60
Asn His Phe Glu Gly His Tyr Gln Tyr Lys Cys Ile Pro Val Glu Asp
 65          70          75          80
Asn His Lys Ala Asp Ile Ser Ser Trp Phe Met Glu Ala Ile Glu Tyr
 85          90          95
Ile Asp Ala Val Lys Asp Cys Arg Gly Arg Val Leu Val His Cys Gln
100          105          110
Ala Gly Ile Ser Arg Ser Ala Thr Ile Cys Leu Ala Tyr Leu Met Met
115          120          125
Lys Lys Arg Val Arg Leu Glu Glu Ala Phe Glu Phe Val Lys Gln Arg
130          135          140
Arg Ser Ile Ile Ser Pro Asn Phe Ser Phe Met Gly Gln Leu Leu Gln
145          150          155          160
Phe Glu Ser Gln Val Leu Ala Thr Ser

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165

<210> 20
 <211> 171
 <212> PRT
 <213> Homo sapiens

<400> 20
 Ser Glu Arg Ala Leu Ile Ser Gln Cys Gly Lys Pro Val Val Asn Val
 1 5 10 15
 Ser Tyr Arg Pro Ala Tyr Asp Gln Gly Gly Pro Val Glu Ile Leu Pro
 20 25 30
 Phe Leu Tyr Leu Gly Ser Ala Tyr His Ala Ser Lys Cys Glu Phe Leu
 35 40 45
 Ala Asn Leu His Ile Thr Ala Leu Leu Asn Val Ser Arg Arg Thr Ser
 50 55 60
 Glu Ala Cys Met Thr His Leu His Tyr Lys Trp Ile Pro Val Glu Asp
 65 70 75 80
 Ser His Thr Ala Asp Ile Ser Ser His Phe Gln Glu Ala Ile Asp Phe
 85 90 95
 Ile Asp Cys Val Arg Glu Lys Gly Gly Lys Val Leu Val His Cys Glu
 100 105 110
 Ala Gly Ile Ser Arg Ser Pro Thr Ile Cys Met Ala Tyr Leu Met Lys
 115 120 125
 Thr Lys Gln Phe Arg Leu Lys Glu Ala Phe Asp Tyr Ile Lys Gln Arg
 130 135 140
 Arg Ser Met Val Ser Pro Asn Phe Gly Phe Met Gly Gln Leu Leu Gln
 145 150 155 160
 Tyr Glu Ser Glu Ile Leu Pro Ser Thr Pro Asn
 165 170

<210> 21
 <211> 180
 <212> PRT
 <213> Homo sapiens

<400> 21
 Ser Gly Ser Phe Glu Leu Ser Val Gln Asp Leu Asn Asp Leu Leu Ser
 1 5 10 15
 Asp Gly Ser Gly Cys Tyr Ser Leu Pro Ser Gln Pro Cys Asn Glu Val
 20 25 30
 Thr Pro Arg Ile Tyr Val Gly Asn Ala Ser Val Ala Gln Asp Ile Pro
 35 40 45
 Lys Leu Gln Lys Leu Gly Ile Thr His Val Leu Asn Ala Ala Glu Gly
 50 55 60
 Arg Ser Phe Met His Val Asn Thr Asn Ala Asn Phe Tyr Lys Asp Ser
 65 70 75 80
 Gly Ile Thr Tyr Leu Gly Ile Lys Ala Asn Asp Thr Gln Glu Phe Asn
 85 90 95
 Leu Ser Ala Tyr Phe Glu Arg Ala Ala Asp Phe Ile Asp Gln Ala Leu
 100 105 110
 Ala Gln Lys Asn Gly Arg Val Leu Val His Cys Arg Glu Gly Tyr Ser
 115 120 125
 Arg Ser Pro Thr Leu Val Ile Ala Tyr Leu Met Met Arg Gln Lys Met

130		135		140											
Asp	Val	Lys	Ser	Ala	Leu	Ser	Ile	Val	Arg	Gln	Asn	Arg	Glu	Ile	Gly
145					150					155					160
Pro	Asn	Asp	Gly	Phe	Leu	Ala	Gln	Leu	Cys	Gln	Leu	Asn	Asp	Arg	Leu
				165					170					175	
Ala	Lys	Glu	Gly												
			180												

<210> 22
 <211> 150
 <212> PRT
 <213> Homo sapiens

<400> 22
Met Gly Val Gln Pro Pro Asn Phe Ser Trp Val Leu Pro Gly Arg Leu
1 5 10 15
Ala Gly Leu Ala Leu Pro Arg Leu Pro Ala His Tyr Gln Phe Leu Leu
20 25 30
Asp Leu Gly Val Arg His Leu Val Ser Leu Thr Glu Arg Gly Pro Pro
35 40 45
His Ser Asp Ser Cys Pro Gly Leu Thr Leu His Arg Leu Arg Ile Pro
50 55 60
Asp Phe Cys Pro Pro Ala Pro Asp Gln Ile Asp Arg Phe Val Gln Ile
65 70 75 80
Val Asp Glu Ala Asn Ala Arg Gly Glu Ala Val Gly Val His Cys Ala
85 90 95
Leu Gly Phe Gly Arg Thr Gly Thr Met Leu Ala Cys Tyr Leu Val Lys
100 105 110
Glu Arg Gly Leu Ala Ala Gly Asp Ala Ile Ala Glu Ile Arg Arg Leu
115 120 125
Arg Pro Gly Ser Ile Glu Thr Tyr Glu Gln Glu Lys Ala Val Phe Gln
130 135 140
Phe Tyr Gln Arg Thr Lys
145 150